Binocular Collimation Instructions

The typical collimation procedure for binoculars is often as an easy operation. One notable exception to this is when the binoculars are in gross misalignment. Gross misalignment is easily determined when the large circle of light beamed through the eyepiece end, as viewed from the objective end, and is significantly off center of the binoculars internals. In other words, this large disc of light (which is the same exact thing as the aperture opening of the eyepiece itself) will not be seen as circularly centered against the circles that are the prism hole in the middle of the binoculars, and the objective lens circumference. These three areas mentioned are viewed in series from the front (objective) end of the binoculars. Choose the optical tube that looks the most misaligned when ready to make the needed collimation adjustment.

Minor collimation happens when the binoculars were misaligned accidently either through shipping or from a drop, etc., most often only a slight tweaking of one or both of the tiny set screws, that tilt the rear porro prisms (the ones nearest the eyepieces), is all that should be required. This procedure will true up the parallel nature of the two binocular tubes that make up the binocular vision.

How to Collimate Binoculars

1. Set the binoculars on a solid surface pointing them horizontally

2. Center in the field of view focused in on a prominent fixed image (about 1/2 mile or more away).
   Optional: mounting the binoculars onto a tripod is also recommended for stabilizing for this procedure and may be preferred to the solid surface method. The benefit of this is that you may position yourself behind the binoculars to work on them easily.

3. Take a very small 1mm size jeweler's flat bladed screwdriver and stick it into the gap at the edge of the rubber covering next to the prism covers (see image showing the location). These prism covers are the ones with the imprint of the power name and/or specifications on them and are located just under the eyepieces.

4. Work the screwdriver tip back and forth to pry loose the attachment of the rubber housing from the body of the binocular

5. Separate the rubber just far enough back away from the body so you are able to grasp the edge of the rubber covering with thumb and forefinger. It should be enough so that the alignment screw can be easily accessed.

6. Place a small acorn nut or similar object under the rubber covering to keep it well raised enough so that the adjustment screw is easily accessible.

7. Place the screwdriver tip into the screw in the set screw hole.

8. Place your eyes about 6" away from the eyepieces and look at the chosen distant fixed object through both of binocular tubes together.

9. Turn the tiny screw back and forth slowly (less than 1/4 of a turn each way) while watching the images shift apart from one another or merge together. Find and stop turning it at the point where it seems to be best for a well joined (fused) image as viewed through both binocular tubes. Note: Instead of being 6" away, you may have better results trying this procedure with the eyes right up to the binoculars as they would normally be used. Which ever works better for your eyes.

If the image still seems to remain a bit out of alignment no matter how close you can get the image to fuse, repeat steps above to turn the tiny screw on the other tube in the same fashion to *walk* the images together better. The images will walk at a 90 degree angle to that of the first tubes adjustment screw motion. Once you get a feel for the motions involved with this, that should be all it takes to get good alignment with both optical tubes. The rubber covering most normally springs right back into place so there is not a need to glue it down. Repeat steps if the binocular misaligns again.

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